

Natural and Man-made Fibers

Grade Levels:

4-6

Question:

Do natural fibers decompose faster than man-made fibers?

Possible Hypotheses:

Natural fibers will decompose faster/slower than man-made fibers.

Materials:

Old 100% cotton t-shirt

Old nylon stocking or tights

Old wool sock or yarn

Old acrylic or polyester sweater

Plot of soil

Water

Glass jar with lid

Procedure:

1. Cut three four-inch squares from each material.
2. Bury one square of each material, making sure you mark the spot where they are buried. Put squares of each material in a jar, fill it with water, and put a lid on it. Place the jar inside in a sunny place. Place the third squares in a dark place where they will not be disturbed.
3. After one month, remove the samples from the ground and the jar. Examine the squares and record your observations.

Analysis and Conclusion:

Which fibers deteriorated? Which environment made the materials deteriorate more quickly? Can you find out why?

